Argo-España

Parte de la estrategia global de observación del océano

Report on Argo float WMO *6901244* deployment

ARGO ESPAÑA – SOCIB - IEO / 21 – 63

Argo float deployment for

WMO 6901244

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1. Deployment design

Following the Argo program goals, the float density criteria demands a coverage distribution of 3º x 3º grid cells (Fig. 1). In order to maintain the global Argo network coverage and taking in account the current distribution of the Argo floats, Argo España planned 1 float deployment in the Balearic sea area after some gaps in the network were identified.

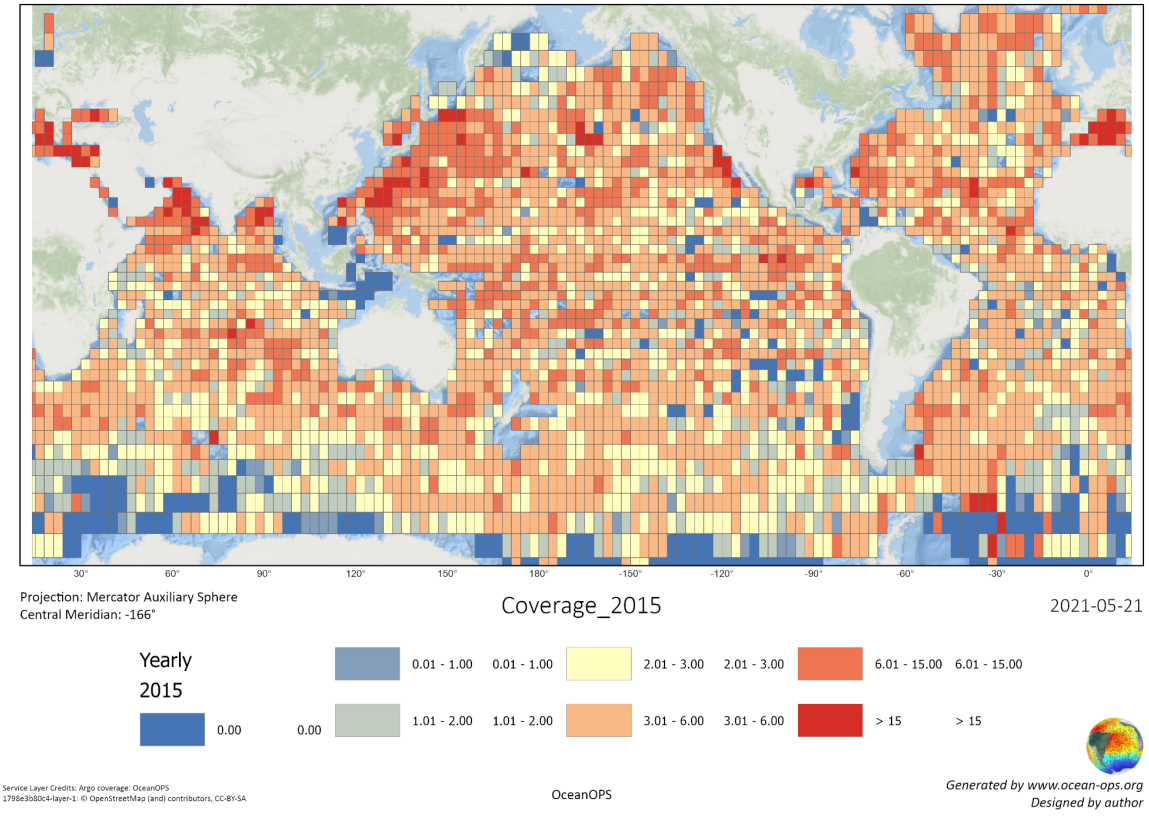


Figure 1. Density of Argo observations in 2015. Deployments in the South Atlantic Ocean are needed if density observations goals want to be reached

In the *SOCIB ALMO November 2015* cruise, Pedro Vélez (IEO) led the Argo deployment planning. The R/V SOCIB was planned to carry out the research in the Balearic Sea, through Denia – Ibiza (Fig.2). Floats deployed at the Balearic Sea are occasionally driven out to shore land, making this area a difficult region to observe continuously. The survey was divided in several transects, which includes an ideal location for Argo España purposes. An Argo float was launched in the area with weak southward flowing currents, soon after

commencing passage the current became southward flowing.

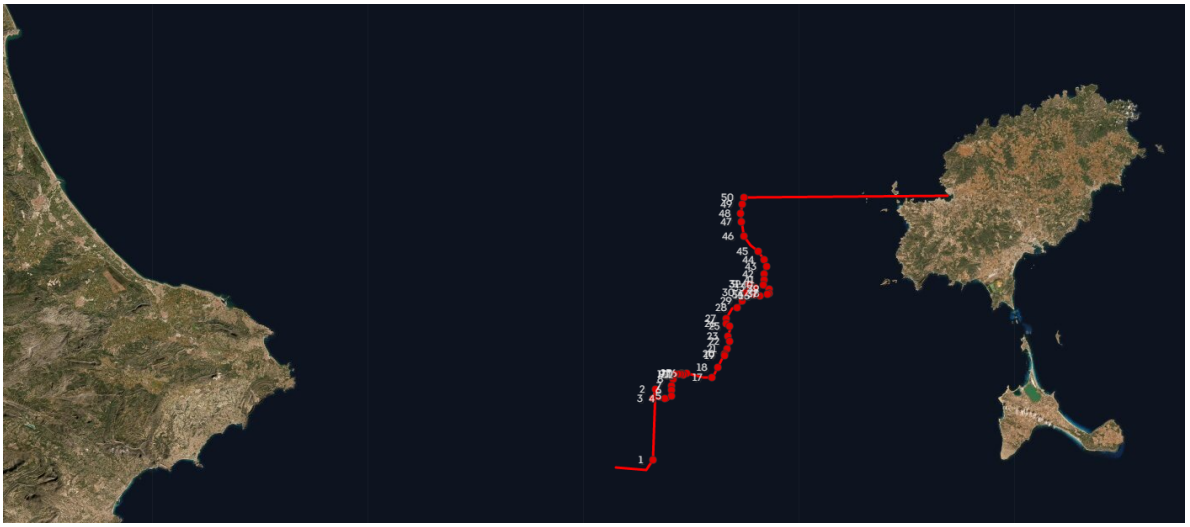


Figure 2. Argo's deployment and trajectory in the *SOCIB ALMO November 2015* cruise.

2. Deployment data

Information of the float deployments is shown in these paragraphs.

a. **WMO 6901244.** The following table contains all the data of the WMO 6901244 deployment during *SOCIB ALMO November 2015* cruise, deployed in the Ibiza Channel (Fig. 2). No troubled issues during the deployment were reported. At the same location will test CTD to check new cable termination. Coriolis was notified and all the information was registered at the Argo Information Center database. The data is free and publicly available through the Argo data stream:

   http://www.oceanografia.es/argo/datos/floats/6901244.html

DATE AND TIME	2015 - 11 - 27 / 11:30 UTC
DEPLOYMENT LOCATION	38º37.818' N 00º45.319' E
DEPLOYMENT PLATFORM	R/V SOCIB
CRUISE ID	*SOCIB ALMO*
FLOAT OWNER	SOCIB
PLATFORM TYPE	Apex
SERIAL NUMBER	6917
TRANSMISSION SYSTEM	IRIDIUM
PARKING DEPTH (m)	700
PROFILE DEPTH (m)	2000
DEPLOYMENT DEPTH (m)	800
WEATHER CONDITIONS	*2-2.5 m waves*
IP CRUISE	Emma Heslop

Table 1. WMO 6901244 information deployment.

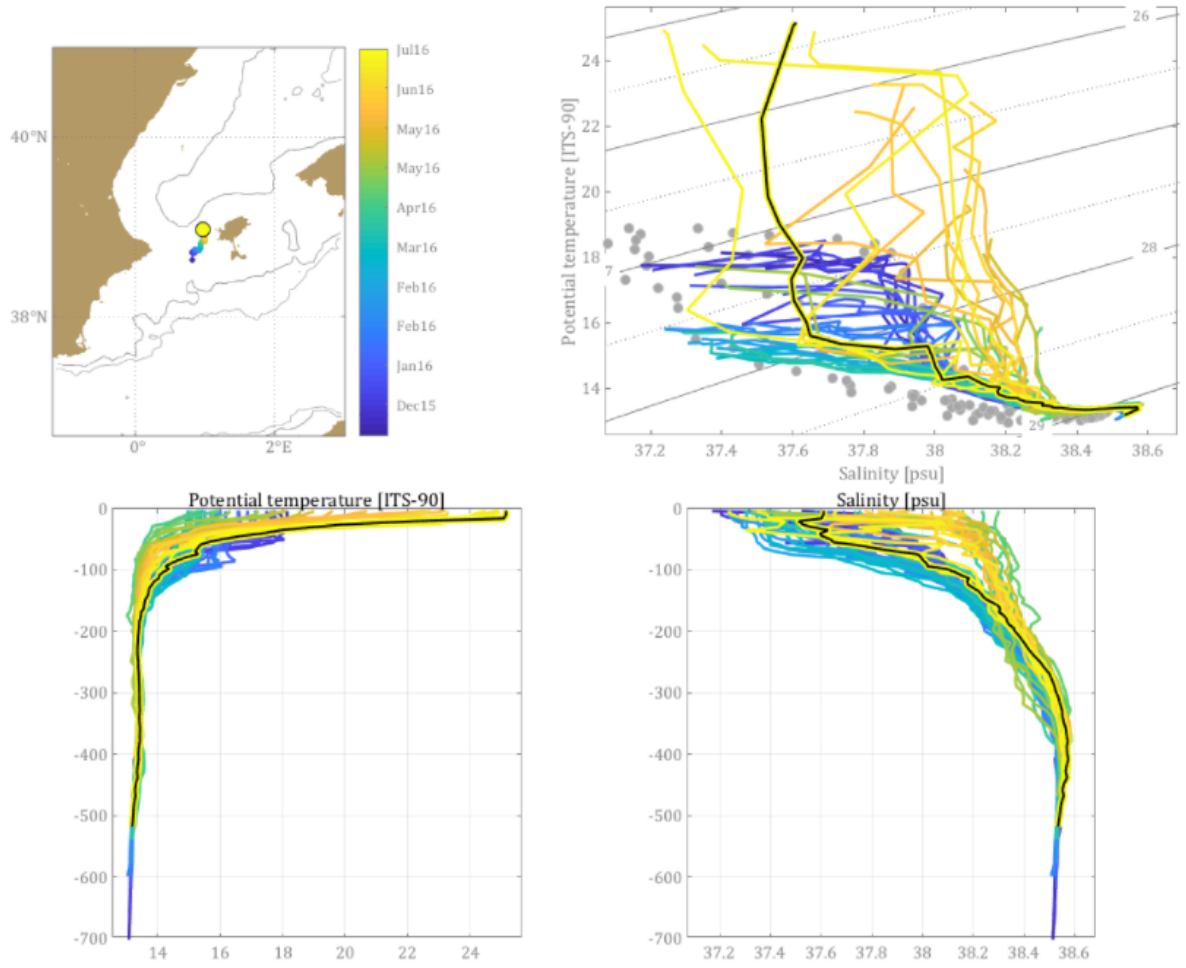
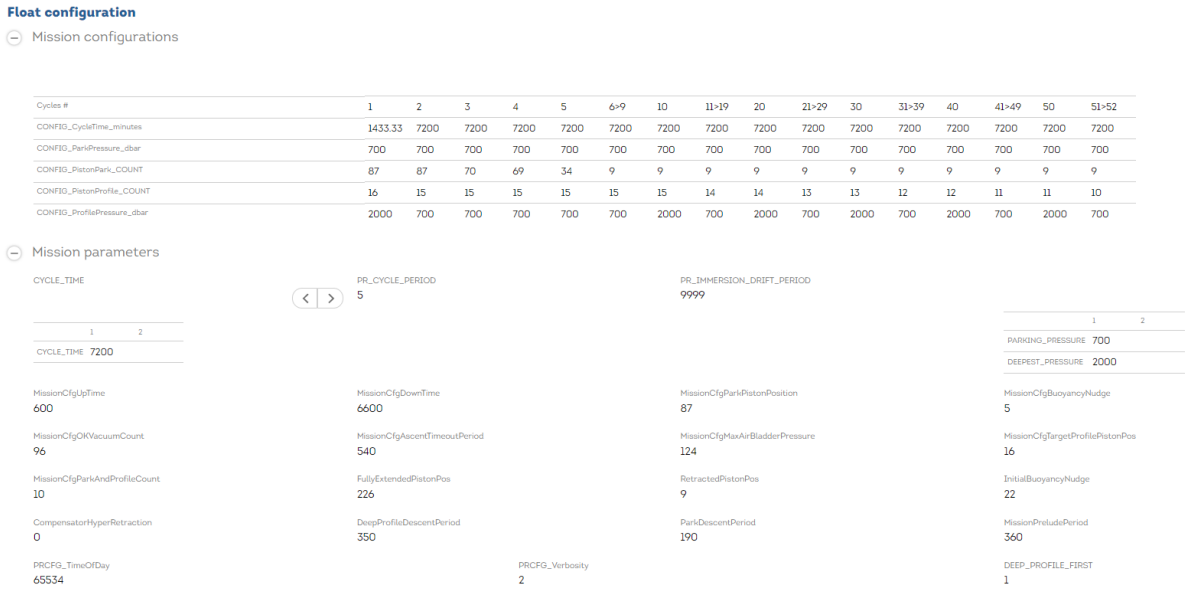


Figure 3. The trajectory of the float since the deployment is shown in the upper left side of the picture. T-S diagram of the data collected by WMO 6901244 is shown in the upper right side of the picture. The grey points are the climatology of the area. The black line is the first profile carried out by the float. The dark blue dashed line describes the CTD cast carried out from the R/V SOCIB. Potential Temperature and Salinity profiles are also shown in the lower side of the picture.

3. Float configuration

"MC" parameters (Fig. 4) were set according to the scientific requirements and the oceanographic area of study (Balearic Sea).



Float configuration

Mission configurations

Cycles #	1	2	3	4	5	6>9	10	11>19	20	21>29	30	31>39	40	41>49	50	51>52
CONFIG_CycleTime_minutes	1433.33	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
CONFIG_ParkPressure_dbar	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
CONFIG_PistonPark_COUNT	87	87	70	69	34	9	9	9	9	9	9	9	9	9	9	9
CONFIG_PistonProfile_COUNT	16	15	15	15	15	15	15	14	14	13	13	12	12	11	11	10
CONFIG_ProfilePressure_dbar	2000	700	700	700	700	700	2000	700	2000	700	2000	700	2000	700	2000	700

Mission parameters

CYCLE_TIME

	1	2
CYCLE_TIME	7200	

PR_CYCLE_PERIOD: 5

PR_IMMERSION_DRIFT_PERIOD: 9999

	1	2
PARKING_PRESSURE	700	
DEEPEST_PRESSURE	2000	

MissionCfgUpTime: 600	MissionCfgDownTime: 6600	MissionCfgParkPistonPosition: 87	MissionCfgBuoyancyNudge: 5
MissionCfgOKVacuumCount: 96	MissionCfgAscentTimeoutPeriod: 540	MissionCfgMaxAirBladderPressure: 124	MissionCfgTargetProfilePistonPos: 16
MissionCfgParkAndProfileCount: 10	FullyExtendedPistonPos: 226	RetractedPistonPos: 9	InitialBuoyancyNudge: 22
CompensatorHyperRetraction: 0	DeepProfileDescentPeriod: 350	ParkDescentPeriod: 190	MissionPreludePeriod: 360
PRCFG_TimeOfDay: 65534	PRCFG_Verbosity: 2		DEEP_PROFILE_FIRST: 1

Figure 4. Configuration sheet for the float deployed during *SOCIB ALMO November 2015* cruise. Source: Argo Fleet monitoring tool

4. Acknowledgements

Argo España would like to thank Emma Heslop and the rest of the crew of the R/V SOCIB, who cooperated for the success of the mission.